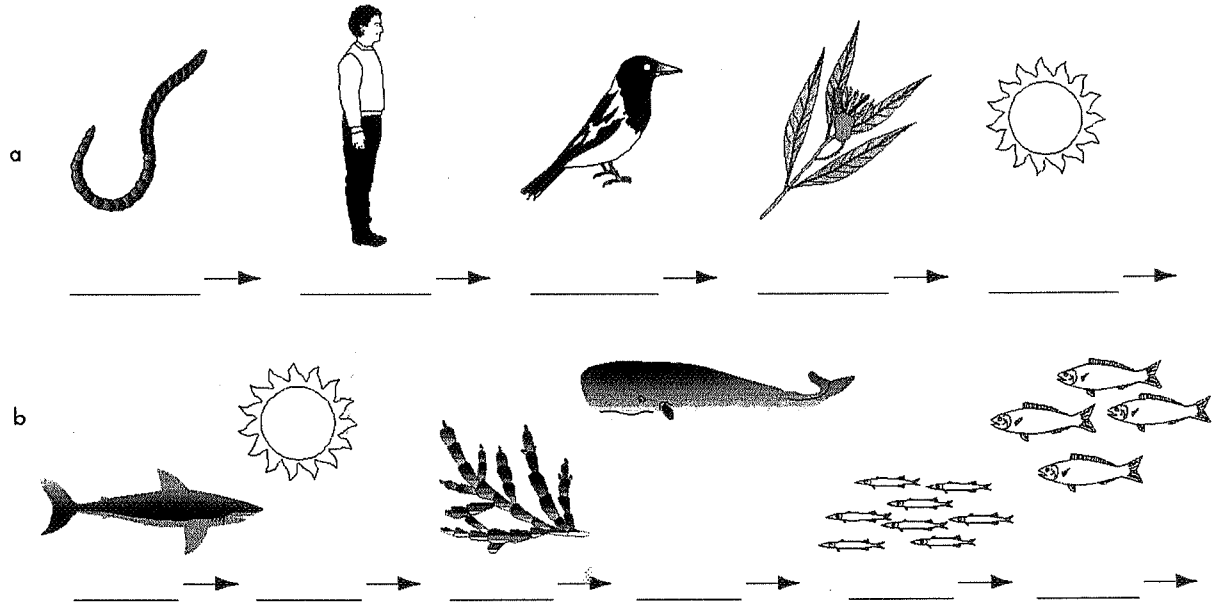


Ecosystems

1 Arrange the plants and animals below in their correct order in food chains a and b.



2 Choose words from the box to complete the sentences below.

habitat ecosystem adaptations environment
ecology population community

Special characteristics that help living things (organisms) to survive in their habitat are called _____.

The study of how living things interact with their environment is called _____.

The _____ is everything, both living and non-living, that surrounds and affects an organism.

The place where a plant or animal lives is called its _____.

A _____ is a group of living things of the same species that live in the same habitat.

A _____ is a group of living things of different species that live in the same habitat.

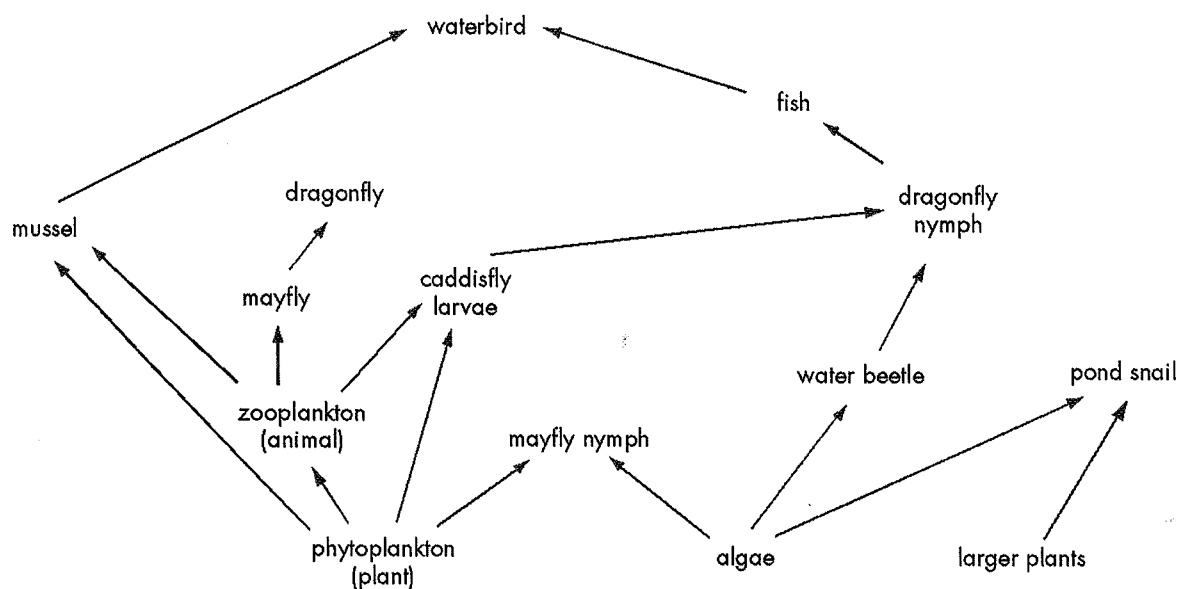
Living and non-living things in a particular habitat are part of an _____.

Ecosystems

A freshwater habitat

Use the diagram of the food web below to answer the questions. You will also need the following information.

- Consumers which eat producers are called **first-order consumers**.
- Consumers which eat first-order consumers are called **second-order consumers**, and so on.
- An animal may be both a first- and second-order consumer, depending on what it is eating.



A food web in a freshwater habitat.

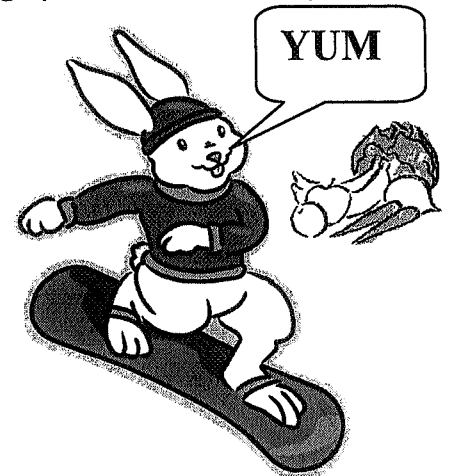
- 1 Name the first-order consumers in this food web.
- 2 List the producers in this web.
- 3 From where do the producers obtain their food and energy?
- 4 What do dragonfly nymphs feed on?
- 5 Do dragonflies, at any stage in their life cycle, have different predators? What are they?
- 6 Which consumers feed on zooplankton?
- 7 Name four second-order consumers in the food web.
- 8 Why is the caddisfly larva both a first- and a second-order consumer?
- 9 Mussels are second-order consumers when they feed on which organism?
- 10 Imagine that all the fish in the freshwater habitat were killed. What would happen to the water birds in the food web? What would be the effect on other organisms such as dragonfly nymphs and water beetles?

FOOD CHAINS

Before watching the video answer the following questions:

1. What does the word **food chain** mean to you? Use an example to help explain your answer.
2. What does the word **food web** mean to you?
3. Do you think food chains and food webs are the same thing? Explain.

Watch the video and answer the following questions in the spaces below:



1. Where can you find food chains?
2. Where do food chains start?
3. What usually feeds on small plants?
4. What can prevent the rabbit populations from growing?
5. How can rabbit numbers be reduced?
6. What happens in the food chain shown on the video, if there were heaps of lettuces?
7. How can we show how food chains are linked?
8. On the video, why are they studying the fish population?
9. Which parts of this video were interesting and why?
10. Draw you as part of a food chain, starting with the sun.

ECOLOGY

Ecology is the scientific study of the relationship between living things, and between living things and their environment. Ecology includes the study of everything around us - not just the bush, rainforest or oceans. It also includes the houses, factories, roads, cars and everything that has an effect on the environment.



Research one of the following:

1. Use the library or other resources to find out more about one of Australia's most threatened vertebrate species. Write a short report, or design a poster, and include the following information;
 - a. A description of the animal and its habitat
 - b. A list of the animal's requirements (eg. Food, shelter)
 - c. Reasons why the animal is threatened with extinction
 - d. What, if anything, is being done to save the species?

Choose one of the following species; mountain pygmy possum, leadbeater's possum, spotted-tailed quoll, dugong, southern right whale, humpback whale, western black-striped snake, western swamp turtle, platypus frog,, trout cod, mallee fowl, helmeted honeyeater, golden-shouldered parrot and yellow-bellied parrot.

2. Choose one of the following parasites. Explain how it infests its host and how it affects its host. Malaria, tapeworms, ticks, insect galls in trees, blight and mange.
3. Many organisms are disappearing because of the destruction of their habitats. Find out about the burning of rainforest in the Amazon jungles to make room for farming. Present both sides of the argument about whether or not the rainforest should be burnt down.
4. A number of years ago the insecticide DDT was used on farms to kill insects pests. Find out;
 - a. Why DDT causes a problem for consumers higher up the food web
 - b. How DDT got into aquatic environments such as lakes and the ocean.